PATHOLOGICAL ANXIETY

Emotional Processing in Etiology and Treatment

Edited by
BARBARA OLASOV ROTHBAUM

THE GUILFORD PRESS
New York London

A Division of Guilford Publications, Inc.
72 Spring Street, New York, NY 10012
www.guilford.com

Printed in the United States of America

This book is printed on acid-free paper.

Last digit is print number: 9 8 7 6 5 4 3

Library of Congress Cataloging-in-Publication Data

Pathological anxiety : emotional processing in etiolo
ment / edited by Barbara Olasov Rothbaum.
p. ; cm.
Includes bibliographical references and index.
ISBN 1-59385-223-1 (alk. paper)
1. Anxiety—Treatment. 2. Cognitive therapy. 3.
(Psychology) I. Rothbaum, Barbara Olasov.
[DNLM: 1. Anxiety Disorders—therapy. 2. Anx
—etiology. 3. Anxiety Disorders—physiopathology.
Therapy—methods. 5. Fear—psychology. 6. Image
therapy)—methods. WM 172 P297 2005]
RC531.P38 2006
616.85'2206—dc22

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Assessment Strategies in the Anxiety Disorders

DAVID RIGGS
TERENCE M. KEANE

Anxiety is defined as an "apprehensive anticipation of future danger or misfortune accompanied by a feeling of dysphoria or somatic symptoms of tension," (American Psychiatric Association, 2000, p. 820). Closely related to anxiety is the basic emotion of fear. However, theorists have argued that fear and anxiety are distinct (Antony & Barlow, 1996; Lang, McTeague, & Cuthbert, Chapter 4, this volume). Anxiety is seen as anticipatory in that it is focused on upcoming events that are seen as uncontrollable, unpredictable, and potentially dangerous. This anticipation leads to worry and negative affect. In contrast, fear is focused on the present situation and represents an alarm reaction to danger perceived in the immediate environment. Thus a person confronted with a large growling dog may become fearful but will experience anxiety in anticipation of a visit with a friend who owns a large dog.

Lang (1971) conceptualized the related states of fear and anxiety as incorporating responses in each of three channels: cognitive, behavioral, and physiological. Responses in the cognitive realm include anticipation of negative outcomes, biases in information processing, and anxious beliefs. In the behavioral arena, responses include avoidance, distractions, compulsive rituals, and other behaviors that function to increase perceived safety. Physiological responses include a variety of reactions that are consistent with increased autonomic arousal, such as dizziness, increased heart rate and respiration, and sweating. Empirical studies suggest that the three response

channels described by Lang (1971) are not always highly correlated; therefore, it is important to assess reactions in each of the three areas.

Assessment of anxiety and fear should incorporate multiple issues. These include such things as diagnostic features, severity of symptoms, medical conditions that may cause or exacerbate the anxiety symptoms, and the course of the symptoms. Additional areas that may need to be assessed include skills deficits that may contribute to the problem or limit treatment options, family history of anxiety and other mental health problems, and treatment history and preferences (Antony, 2001).

A variety of assessment methods are available for collecting information related to fear and anxiety. The choice of method(s) used will depend on the goals of the assessment and the resources available to complete the assessment. Diagnostic interviews are available for the anxiety disorders in general and for many of the specific disorders included in the DSM-IV (American Psychiatric Association, 1994). Standardized, semistructured diagnostic interviews such as the Structured Clinical Interview for DSM-IV (SCID; First, Spitzer, Gibbon, & Williams, 1996) and the Anxiety Disorders Interview Schedule for DSM-IV (ADIS-IV; Brown, Di Nardo, & Barlow, 1994) represent an excellent means for assessing diagnostic criteria and thus providing a differential diagnosis. Similarly, disorder-specific interviews have been developed to evaluate symptoms of a particular disorder. However, these interviews can be time-consuming and require extensive training. Self-report instruments that focus the assessment on symptoms of a specific disorder or on characteristics of anxiety or fear that transcend specific diagnoses are available. These instruments are generally less time-intensive to administer than a diagnostic interview, but they also allow less flexibility. In addition to these assessment techniques, anxiety and fear may be evaluated using behavioral assessments such as the behavioral approach test, in which a person is asked to confront a feared situation or stimulus, and self-monitoring of specific aspects of anxiety, such as the frequency of compulsive rituals. Similarly, the physiological component of anxiety and fear may be assessed by measuring indices of physiological reactivity, such as heart rate and skin conductance. In this chapter we discuss the assessment of patients by diagnosis, focusing on posttraumatic stress disorder (PTSD), social phobia (SP), obsessive–compulsive disorder (OCD), and panic disorder (PD).

POSTTRAUMATIC STRESS DISORDER

PTSD was initially conceptualized by the diagnostic manuals in mental health as a relatively rare condition owing to a belief that traumatic events such as war, sexual assault, violence, and disasters constituted events beyond the usual experiences of humans. The development of specific, measurable diagnostic criteria for PTSD led to diagnostic interviews,

psychological tests and questionnaires, and ultimately to the conduct of epidemiological studies. Therein, we learned that exposure to traumatic events was indeed common in the general population of the United States (e.g., 61% of men and 51% of women; Kessler et al., 1995) and that PTSD was among the most common of all disorders, with approximately 11% of women and 5% of men developing this condition at some time in their lives. Thus what was previously considered a relatively low prevalence condition in America was found to be among the most common of all mental health conditions, surpassed only by alcohol abuse, depression, and social phobia. The assessment and treatment of PTSD is, therefore, a major concern for the public health of all Americans.

For many people, exposure to a traumatic event results in extreme emotional reactions in the short term, but fortunately most people do recover. However, a significant minority of those exposed do eventually develop PTSD. The development of appropriate assessment measures to be used in the clinical setting was among the very first goals of clinical researchers attempting to improve the treatment of those with PTSD. In the 25 years since the inception of the diagnostic category, clinical researchers have developed many outstanding measures of PTSD suitable for use in every clinical setting, in research laboratories, and in epidemiological field studies (see Keane & Barlow, 2002; Keane, Weathers, & Foa, 2000). Although the progress is excellent for adults, more work remains in the field of assessment of adolescents and children. This section focuses on the assessment of PTSD in adults.

Assessment Issues

Features of PTSD

PTSD is characterized by high levels of anxiety, depression, and related symptomatology. The diagnostic criteria include exposure to a traumatic event, with attendant intense emotional reactions. The expression of symptoms includes experiences that recapitulate the traumatic event, such as nightmares, flashbacks, and preoccupation with the event and/or sensory cues associated with the traumatic event itself. Typically these reliving experiences incorporate some or all of the memory of the traumatic event; when reliving the traumatic event, the individual feels anxiety, fear, horror, anger, or other strong emotions associated with the event.

In addition to reliving experiences, the diagnostic criteria also include avoidance and withdrawal. The avoidance may take the form of behavioral avoidance of people and places associated with the traumatic event or of emotional or cognitive avoidance. For some people, the emotional reactions to cues associated with the traumatic event are so strong and distressing that their lives become increasingly restricted. This restriction can be

emotional, as in the case of emotional numbing, or social, in that individuals may become significantly withdrawn from family and friends.

Other symptoms that constitute the diagnostic picture for PTSD are viewed as hyperarousal and can include concentration and memory impairment, insomnia, irritability and anger, hypervigilance, and exaggerated startle responses. PTSD is often comorbid with alcohol and drug abuse, depression, social anxiety disorder, and panic.

Differential Diagnosis

PTSD is most often seen as a disorder that combines features of the mood disorders, other anxiety disorders, dissociative disorders, and the personality disorders. For this reason, a thorough and complete history that focuses on exposure to the most high-frequency traumatic events is key to accurate diagnosis. Past child abuse and neglect are now commonly assessed in diagnostic interviews, but exposure to natural disasters, industrial and moving vehicle accidents, and domestic and community violence are less frequently assessed. Sexual assault and rape are commonly assessed among women, but less so among men. When violence within the family is involved or if the aftermath of sexual assault is troubling an individual, people may be reluctant to openly communicate these experiences. The shame or humiliation commonly associated with these events highlights the importance of early screening for these life experiences. Missing the exposure component will increase the likelihood that an inaccurate diagnosis will ensue.

It is clear that PTSD is one disorder that frequently follows exposure to a traumatic event, but it is not the only one. Depression, phobia, panic, substance abuse, and adjustment disorder are frequent outcomes as well. The prevalence of dissociative disorders following exposure to traumatic events is not known at the moment, but they are likely frequent sequelae.

Assessment Strategies

Structured Diagnostic Interviews

Clinician-administered structured diagnostic interviews are valuable tools for assessing PTSD (Keane et al., 1996). Whereas it is standard practice in clinical research settings to employ structured diagnostic interviews, the use of these types of interviews in the clinical setting is less common, with perhaps the single exception of clinical forensic practice (Keane, 1995; Keane, Buckley, & Miller, 2003). Several structured interviews are available that were developed for the assessment of PTSD either as modules of comprehensive diagnostic assessment tools or as independent PTSD measures. These are described next.

Structured Clinical Interview for DSM-IV (SCID-IV). The SCID-IV (First et al., 1997) is designed to assess a broad range of psychiatric conditions on Axis I and Axis II. It is divided into separate modules corresponding to DSM-IV (American Psychiatric Association, 1994) diagnostic criteria, with each module providing the interviewer with specific prompts and follow-up inquiries intended to be read verbatim to respondents. The SCID is intended for use only by clinicians and highly trained interviewers.

Although the administration of the full SCID-IV can be time-consuming, the modular structure allows clinicians to limit their assessment to conditions that are frequently comorbid with PTSD. Within the context of a trauma clinic, it is recommended that the anxiety disorders, affective disorders, and substance use disorder modules be given. Administration of the psychotic screen will also help to rule out conditions that require a different set of interventions (Keane & Barlow, 2002).

The SCID–PTSD module is considered psychometrically sound. Keane et al. (1998) examined the interrater reliability of the SCID by asking a second interviewer to listen to audiotapes of an initial interview. They found a kappa of .68 and agreement across "lifetime," "current," and "never" levels of PTSD of 78%. Similarly, in a sample of patients who were reinterviewed within a week by a different clinician, they found a kappa of .66 and diagnostic agreement of 78%. The SCID–PTSD module also yielded substantial sensitivity (.81) and specificity (.98) and a robust kappa (.82) in one clinical sample against a composite PTSD diagnosis (Kulka et al., 1988), indicating good diagnostic utility.

Clinician-Administered PTSD Scale (CAPS). Developed by the National Center for PTSD (Blake et al., 1990), the CAPS is currently the most widely used structured interview for diagnosing and measuring the severity of PTSD (Weathers, Keane, & Davidson, 2001). The CAPS assesses all DSM-IV (American Psychiatric Association, 1994) diagnostic criteria for PTSD, including Criteria A (exposure), B–D (core symptom clusters), E (chronology), and F (functional impairment), as well as associated symptoms of guilt and dissociation. The CAPS also promotes uniform administration and scoring through carefully phrased prompt questions and explicit rating scale anchors with clear behavioral referents.

Weathers et al. (2001) extensively reviewed the psychometric studies conducted on the CAPS. Weathers, Ruscio, and Keane (1999) examined the reliability and validity data of the CAPS across five samples of male Vietnam veterans collected at the National Center for PTSD. Robust estimates were found for interrater reliability over a 2–3 day interval for each of the three symptom clusters (.86–.87 for frequency, .86–.92 for intensity, and .88–.91 for severity) and all 17 symptoms (.91 for total frequency, .91 for total intensity, and .92 for total severity). Test–retest reliability for a

CAPS-based PTSD diagnosis was also high (kappa = .89 in one sample and 1.00 in a second sample). Thus the data indicate that trained and calibrated raters can achieve a high degree of consistency in using the CAPS to rate PTSD symptom severity and diagnose PTSD. Weathers et al. (1999) also found high internal consistency across all 17 items in a research sample (alphas of .93 for frequency and .94 for intensity and severity) and a clinical sample (alphas of .85 for frequency, .86 for intensity, and .87 for severity), supporting its use in research and clinical settings.

Strong evidence for validity of the CAPS was also provided by Weathers et al. (1999), who found that the CAPS total severity score correlated highly with other measures of PTSD (Mississippi Scale = .91, MMPI–PTSD Scale = .77, the number of PTSD symptoms endorsed on the SCID = .89, and the PTSD Checklist = .94; Weathers, Litz, Herman, Huska, & Keane, 1993).

The CAPS has now been used successfully in a wide variety of trauma populations (e.g., combat veterans and survivors of rape, crime, motor vehicle accidents, incest, the Holocaust, torture, and cancer), has served as the primary diagnostic or outcome measure in more than 200 empirical studies on PTSD, and has been translated into at least 12 languages (Weathers et al., 2001). Thus the existing data strongly support its continued use in both clinical and research settings.

PTSD Symptom Scale—Interview (PSS-I). Developed by Foa, Riggs, Dancu, and Rothbaum (1993), the PSS-I is a structured interview designed to assess symptoms of PTSD in individuals with a known trauma history. Using a Likert scale, interviewers rate the severity of 17 symptoms corresponding to the DSM criteria for PTSD. The PSS-I was originally tested in a sample of women with a history of rape and nonsexual assault (Foa et al., 1993) and was found to have strong psychometric properties. Foa and colleagues reported high internal consistency (Cronbach alphas = .85 for full scale, .65–.71 for subscales), test–retest reliability over a 1-month period (.80), and interrater agreement for a PTSD diagnosis (kappa = .91, 95% agreement). With respect to validity, the PSS-I was significantly correlated with other measures of traumatic stress (e.g., .69, Impact of Event Scale Intrusion score, Horowitz, Wilner & Alvarez, 1979; and .67, Rape Aftermath Symptom Test [RAST] total score, Kilpatrick, 1988) and demonstrated good diagnostic utility when compared with a SCID–PTSD diagnosis (sensitivity = .88, specificity = .96). The PSS-I appears to possess many strong features that warrant its use in clinical and research settings, especially with sexual-assault survivors.

Structured Interview for PTSD (SIP). Originally developed by Davidson, Smith, and Kudler (1989), the SIP is designed to diagnose PTSD and to measure symptom severity. It includes 17 items focused on the DSM-IV

(American Psychiatric Association, 1994) criteria for PTSD, as well as two items focused on survivor and behavior guilt. Each item is rated by the interviewer on a Likert scale. There are initial probe questions and follow-up questions to promote a more thorough understanding of the respondent's symptom experiences. The SIP takes 10–30 minutes to administer depending on the level of symptomatology present.

Psychometric data for the SIP is good. In a sample of combat veterans, Davidson et al. (1989) reported high interrater reliability (.97–.99) on total SIP scores and perfect agreement on the presence or absence of PTSD across raters. High alpha coefficients have also been reported (.94 for the veteran sample; Davidson et al., 1989, and .80 for PTSD patients enrolled in a clinical trial; Davidson, Malik, & Travers, 1997). In the veteran sample, test–retest reliability for the total SIP score was .71 over a 2-week period. With respect to validity, the SIP was significantly correlated with other measures of PTSD, but not with measures of combat exposure (.49–.67; Davidson et al., 1989, 1997). Davidson et al. (1989) compared the SIP scores of current and remitted SCID-defined PTSD cases and reported good sensitivity (.96) and specificity (.80) against the SCID. The SIP correctly classified 94% of cases relative to a structured clinical interview (Davidson et al., 1997). Overall, the SIP appears to be a sound instrument.

Self-Report PTSD Questionnaires

Numerous self-report measures have been developed as a method for obtaining information on PTSD. For the most part, self-report measures are used as continuous measures of PTSD to reflect symptom severity, but in several cases specific cutoff scores have been developed to provide a diagnosis of PTSD. These measures are generally more time- and cost-efficient than structured interviews and can be especially valuable when used as screens for PTSD. The data also support the use of self-report questionnaires alone in clinical and research settings when it is not feasible or practical to administer a structured interview. Many of the measures can be used interchangeably, as the findings appear to be robust for the minor variations in methods and approaches involved. In selecting a particular instrument, the clinician is encouraged to examine the data for that instrument for the population on which it is to be employed.

Impact of Event Scale—Revised (IES-R). Developed by Horowitz et al. (1979), the IES is one of the most widely used self-report measures to assess psychological responses to a traumatic stressor. Since the publication of DSM-IV (American Psychiatric Association, 1994), a revised 22-item version of the scale (IES-R; Weiss & Marmar, 1997) was developed that includes items on hyperarousal symptoms and flashback experiences to more closely parallel DSM-IV criteria for PTSD. To complete

the measure, respondents who have experienced a traumatic event rate on a Likert scale "how distressed or bothered" they were by each symptom during the preceding week. It takes approximately 10 minutes to complete.

Although much data existed on the psychometric properties of the original IES, data on the psychometric properties of the revised IES-R are preliminary in nature. In two studies that incorporated four samples of emergency workers and earthquake survivors, Weiss and Marmar (1997) reported satisfactory internal consistency for each of the subscales (alphas = .87–.92 for Intrusion, .84–.86 for Avoidance, and .79–.90 for Hyperarousal). Test–retest reliability data from two samples yielded a range of reliability coefficients for the subscales (Intrusion = .57–.94, Avoidance = .51–.89, Hyperarousal = .59–.92). They suggest that the shorter interval between assessments and the greater recency of the traumatic event for one sample contributed to higher coefficients of stability for that sample.

Convergent and discriminant validity data are not yet available for the IES-R. Many questions were raised about the validity of the original scale, in part because it did not assess all DSM criteria for PTSD (see Weathers, Keane, King, & King, 1996). Although it now more closely parallels DSM-IV (American Psychiatric Association, 1994), some consider the items measuring numbing to be limited (Foa, Cashman, Jaycox, & Perry, 1997). Additional studies with the revised instrument are needed to establish its reliability and validity and ensure its continued use in clinics and research settings.

Mississippi Scale for Combat-Related PTSD. Developed by Keane, Caddell, and Taylor (1988), the 35-item Mississippi Scale is widely used to assess combat-related PTSD symptoms. The scale items were selected from an initial pool of 200 items generated by experts to closely match the DSM-III (American Psychiatric Association, 1980) criteria for the disorder. The Mississippi Scale has been updated and now assesses the presence of symptoms reflecting the DSM-IV (American Psychiatric Association, 1994) criteria for PTSD and several associated features. Respondents are asked to rate, on a Likert scale, the severity of symptoms over the time period occurring "since the event." The Mississippi Scale yields a continuous score of symptom severity, as well as diagnostic information. It is available in several languages and takes 10–15 minutes to administer.

The Mississippi Scale has excellent psychometric properties. In Vietnam-era veterans seeking treatment, Keane et al. (1988) reported high internal consistency (alpha = .94) and test–retest reliability (.97) over a 1-week time interval. In a subsequent validation study, the authors found substantial sensitivity (.93) and specificity (.89) with a cutoff of 107, and an overall hit rate of 90% when the scale was used to differentiate between a group with PTSD and two comparison groups without PTSD. These findings suggest that the Mississippi Scale is a valuable self-report tool in settings in which assessment of combat-related PTSD is needed.

Posttraumatic Diagnostic Scale (PDS). Developed by Foa et al. (1997), the PDS is a 49-item scale designed to measure DSM-IV (American Psychiatric Association, 1994) PTSD criteria and symptom severity. The PDS reviews trauma exposure and identifies the most distressing trauma. It also assesses Criterion A2 (physical threat or helplessness), Criteria B–D (intensity and frequency of all 17 symptoms), and Criterion F (functional impairment). This scale has been used with several populations, including combat veterans, accident victims, and sexual- and nonsexual-assault survivors. The PDS can be administered in 10–15 minutes.

The psychometric properties of the PDS were evaluated among 264 volunteers recruited from several PTSD treatment centers, as well as from non-treatment-seeking populations at high risk for trauma (Foa et al., 1997). Investigators reported high internal consistency for the PTSD total score (alpha = .92) and subscales (alphas = .78–.84) and satisfactory test–retest reliability coefficients for the total PDS score and for the symptom cluster scores (.77–.85). With regard to validity, the PDS total score correlated highly with other scales that measure traumatic responses (IES Intrusion = .80 and Avoidance = .66; RAST = .81). In addition, the measure yielded good sensitivity (.89) and specificity (.75) and high levels of diagnostic agreement with a SCID diagnosis (kappa = .65, 82% agreement). Based on these data, the PDS is an effective and efficient screening tool for PTSD.

PTSD Checklist (PCL). Developed by researchers at the National Center for PTSD (Weathers et al., 1993), the PCL is a 17-item self-report measure of PTSD. Different scoring procedures may be used to yield either a continuous measure of PTSD symptom severity or a dichotomous indicator of diagnostic status. Furthermore, dichotomous scoring methods include either an overall cutoff score or a symptom cluster scoring approach. Respondents are asked to rate, on a Likert scale, "how much each problem has bothered them" during the previous month. The time frame can be adjusted as needed to suit the goals of the assessment. The PCL has been used extensively in both research and clinical settings and takes 5–10 minutes to administer. If needed, a 17-item Life Events Checklist, developed as a companion to the CAPS and aimed at identifying exposure to potentially traumatic experiences and establishing Criterion A for the diagnosis, can be used with the PCL.

The PCL was originally validated in a sample of Vietnam and Persian Gulf War veterans and found to have strong psychometric properties (Weathers et al., 1993). Keen, Kutter, Niles, and Krinsley (2004) examined the psychometric properties of the updated PCL in veterans with both combat- and non-combat-related traumas and found evidence for high internal consistency (alpha = .96 for all 17 symptoms). Test–retest reliability measurement is robust (.96) over a 2–3 day interval, and other investigators have documented adequate test–retest reliability of this measure over a 2-week time frame (Ruggiero, Del Ben, Scotti, & Rabalais, 2003).

With respect to validity, Keen et al. (2004) found that the scale was highly correlated with other measures of PTSD, including the Mississippi Scale (.90) and CAPS (total symptom severity = .79). Using a cutoff score of 60, slightly higher than that used by Weathers et al. (1993), Keen et al. (2004) also found that the PCL had a sensitivity of .56, a specificity of .92, and overall efficiency of .84 when compared with the CAPS, indicating good diagnostic power.

Summary

The recent advances in the assessment of PTSD suggest that the state of the art is nothing short of excellent (Wilson & Keane, 2004). Yet much more work remains to be done. Assessment methods for evaluating adolescents and children are emerging and will soon be used more comprehensively in clinical and research settings. Many of the assessment tools under development are now being translated into other languages, and their cultural sensitivity and appropriateness are being assessed. With traumatic events showing no signs of abatement, future emphases on the study of cultural influences in the assessment of PTSD are warranted (Keane, Weathers, & Kaloupek, 1996).

PANIC DISORDER

PD is characterized by the presence of repeated and unexpected panic attacks and related fear of further attacks, fear of the consequences of the attacks (e.g., having a heart attack, going crazy), or changes in behavior to reduce the likelihood or severity of an attack (e.g., avoiding situations, not going out alone). When these behavioral changes center on the avoidance of numerous situations in which panic attacks might occur or in which it would be difficult to escape or get help should an attack occur, the person may be diagnosed with agoraphobia along with the PD. Prevalence estimates for PD range between 1.5 and 3.5% of the population, and symptoms of panic tend to be chronic, with some waxing and waning over time (American Psychiatric Association, 1994).

Assessment Issues

Features of PD

When assessing PD it is important to document the nature of the panic attacks, including determining how frequently they occur, in what situations they occur, at what times of day they occur, the specific symptoms that are experienced, and what thoughts accompany the attacks (e.g., "I am going to die"; "oh, no, not another one"). These features include aspects of each

of Lang's three channels of anxiety: physiological arousal, cognitive evaluation, and behavioral avoidance. Physiological symptoms of panic attacks include increased heart rate, respiration, and perspiration. The patient may also experience dizziness, nausea, and tingling in the extremities as a result of physiological arousal. Identifying what reactions a particular person has and which ones contribute to increased distress can be important for understanding the nature of the attacks and planning treatment (McCabe, 2001).

In addition to the physiological symptoms of the panic attacks, a complete assessment includes the cognitive evaluation that the person makes of these reactions. PD is typically related to catastrophic thoughts related to the panic symptoms or to their consequences, beliefs about issues related to control, and information processing biases (for a review see Khawaja & Oei, 1998). Accurately identifying these cognitive distortions and biases is important for developing an effective treatment plan. Similarly important for treatment planning and outcome evaluation is the identification of avoided situations that may become goals for exposure exercises and also measures of progress through treatment. Critical to this process is the identification of subtle avoidance strategies (e.g., always being accompanied by a trusted person, avoiding heavy jackets) and other safety behaviors (e.g., always carrying medication, distraction). These behaviors, though not as impairing as agoraphobic avoidance, serve to maintain the panic symptoms and may interfere with treatment if they are not targeted.

Differential Diagnosis

When assessing persons for panic disorder, it is important to keep in mind that panic attacks are not specific to PD. Panic attacks, or symptoms that mimic panic attacks, may also occur with other anxiety disorders, some medical conditions, and the use of certain drugs and other substances. When endeavoring to make a differential diagnosis of PD, it is important first to have the patient complete a medical evaluation to rule out the possibility that the panic symptoms are caused by a medical condition (e.g., hyperthyroidism). Also, the use of cocaine, caffeine, and other substances may lead to elevated arousal and symptoms that mimic panic, as can withdrawal from other substances, such as alcohol. Prior to diagnosing PD, it is necessary to rule out the possibility that the symptoms are caused by the use or withdrawal of substances.

Differentiating PD from other anxiety disorders (once medical and substance use issues have been ruled out) requires careful assessment of the nature and characteristics of the panic attacks. One important characteristic that can serve to differentiate PD from other disorders that may include panic attacks is the determination of whether or not the panic attacks are cued by a particular situation or stimulus. In PD, panic attacks are typically uncued. That is, they seem to happen "out of the blue," without warning

and without an evident trigger. In contrast, panic symptoms associated with other anxiety disorders such as SP and PTSD typically occur in response to specific cues in the environment or to specific thoughts. Thus someone with SP will have panic attacks only in social situations, and persons with PTSD will panic only when reminded of their traumas.

Not everyone with PD will describe his or her panic attacks as uncued. Some individuals, particularly those who have lived with panic for a period of time, will identify certain internal sensations (e.g., an increased heart rate, shortness of breath, dizziness) as triggers for their panic attacks. Typically, it is thought that these individuals have come to recognize early stages of anxious arousal that precipitate full panic attacks. To confirm that the attacks were at one time uncued, it may be necessary to assess the person's experience of his or her first few attacks.

Another means of differentiating panic attacks associated with PD from those related to other disorders is to identify the focus of the person's fears during the attacks. Most individuals with PD report that they fear the attacks or the consequences of the attack rather than the consequences of the situation in which the attack occurs. Thus people with PD, SP, and PTSD may all report that they fear being at a party, but the focus of these fears will be different. Patients with PD might report fearing the physical or psychological consequences of the panic attack (e.g., heart attack, losing control, having someone notice their panic), whereas patients with SP might fear doing or saying something embarrassing, and persons with PTSD may fear an attack from someone at the party. Similarly, although patients with PD and patients with other anxiety disorders may avoid similar situations, the reasons that they avoid these situations will be different.

Assessment Strategies

A variety of assessment tools have been developed to evaluate PD symptoms and related characteristics, and many of them have developed cutoff scores that indicate a high likelihood of meeting a PD diagnosis. However, the semistructured clinical interviews, such as the SCID (First et al., 1996) and the ADIS (Brown et al., 1994), remain the "gold standard" for obtaining the needed information to accurately diagnose PD and the other anxiety disorders. Because of the overlap in symptoms across the anxiety disorders, these interviews that probe for symptoms of all the anxiety disorders provide the best means of making an accurate differential diagnosis.

Self-report instruments have been designed to assess many of the core features of PD. For example, a number of scales measure sensitivity to physiological arousal, including the Anxiety Sensitivity Index (ASI; Peterson & Reiss, 1993), the Body Sensations Interpretation Questionnaire (Clark et al., 1997), the Anxiety Sensitivity Profile (Taylor & Cox, 1998), and the Body Sensations Questionnaire (BSQ; Chambless, Caputo, Bright, & Gallagher,

1984). Each of these measures asks the respondents to indicate the level of fear or distress that they would experience in response to specific physiological sensations. Similarly, self-report instruments have been designed to assess cognitive distortions that are characteristic of PD. These instruments include the Agoraphobic Cognitions Questionnaire (AgCQ; Chambless et al., 1984) and the Catastrophic Cognitions Questionnaire (Khawaja, Oei, & Baglioni, 1994). Others, such as the Body Vigilance Scale (BVS; Schmidt, Lerew, & Trakowski, 1997), measure cognitive biases such as attention to bodily sensations. Agoraphobic avoidance may also be measured using self-report instruments. The Mobility Inventory for Agoraphobia (Chambless, Caputo, Jasin, Gracely, & Williams, 1985) and the Panic and Agoraphobia Scale (PAS; Bandelow, 1999) offer measures of the severity of agoraphobic avoidance. Similarly, the Texas Safety Maneuver Scale (TSMS; Kamphuis & Telch, 1998) can be used to examine more subtle forms of avoidance.

Behavioral assessment techniques, in particular self-monitoring of panic attacks and avoidance behaviors, can prove quite valuable when assessing PD patients. Self-monitoring with panic diaries (e.g., Barlow & Craske, 2000; De Beurs, Chambless, & Goldstein, 1997) can provide very useful information regarding the frequency, severity, and specificity of symptoms of panic attack. The diaries can also provide information regarding in what situations the panic attacks occur and whether they follow any pattern (e.g., more likely to occur in the morning). This information can be used to guide treatment, to evaluate the impact of specific interventions (e.g., exposure exercises, cognitive restructuring), and to assess treatment gains.

SOCIAL PHOBIA

SP is a disorder characterized by significant and persistent fear in social and/or performance situations in which scrutiny or embarrassment could occur. SP is typically chronic, and it may lead to significant impairment, but often those who suffer with SP do not seek treatment (Magee, Eaton, Wittchen, McGonagle, & Kessler, 1996). Social situations are typically avoided, and exposure to such situations almost always results in intense feelings of fear that may include panic attacks. It is also common that persons with social phobia will present with substantial anticipatory anxiety about upcoming social events. When avoidance is not possible, persons with social phobia may try to endure the situation despite their distress, and often they will employ strategic behaviors to manage their fear. SP is one of the most common anxiety disorders, with lifetime prevalence rates of about 13% (Kessler et al., 1994). The disorder tends to persist without treatment, but in some cases symptoms appear to remit over time or fluctu-

ate as a function of external demands (e.g., having to speak in public for a new job, moving to a new school, etc.)

Assessment Issues

Features of SP

Assessment of SP should detail the situations that the patient fears and/or avoids, the intensity of the patient's fear, and an examination of safety behaviors that the patient might use to endure social situations when they cannot be avoided entirely. With regard to the situations that elicit fear, almost any situation that includes social interaction or performance demands may become a source of anxiety for the patient with SP. For each patient, it is important to determine which specific situations produce fear and which do not. For some patients, most social situations will elicit fear, but for about one-third of them, the fears are limited to public speaking (Kessler, Stein, & Berglund, 1998).

Differential Diagnosis

The most likely complication to arise in diagnosing SP is differentiating this disorder from other anxiety disorders. Although fear and avoidance of social situations defines SP, it may also be present in other anxiety disorders, including PD, OCD, and PTSD. As discussed earlier, one means of differentiating these disorders is to identify the focus of the fear. Patients with SP tend to focus their fear on the possibility that they will do or say something that will cause others to judge them negatively. In contrast, OCD patients may fear social situations because they may become contaminated with germs, and PTSD patients may fear that someone might attack them. When patients with SP must remain in social situations, they sometimes engage in strategic behaviors to reduce or manage their fear (e.g., placing their hands in their pockets to avoid trembling). Because these behaviors serve to reduce distress, they may appear similar to compulsive rituals seen in OCD; however, the goal of the behavior is to reduce the chance of negative social judgments rather than avoiding germs, as might be the case in OCD.

Assessment Strategies

As with other anxiety disorders, a comprehensive assessment of social phobia will include a clinical interview, clinician and patient ratings of the patient's symptoms, and behavioral assessments. These different strategies may be emphasized or deemphasized depending on the goal of the assessment. As discussed earlier, semistructured clinical interviews provide the best means to differentially diagnose SP, but these interviews may fail to

capture all of the information needed to develop a treatment plan or to assess progress through treatment.

A number of clinician rating scales and self-report instruments have been developed to measure various aspects of SP. For example, the Liebowitz Social Anxiety Scale (LSAS; Liebowitz, 1987) and the Brief Social Phobia Scale (Davidson et al., 1991) are both clinician-rated scales that provide estimates of fear and avoidance across a range of social and evaluative situations. Similarly, the Social Interaction Anxiety Scale (SIAS; Mattick & Clarke, 1998) and the Social Phobia and Anxiety Inventory (SPAI; Turner, Beidel, & Dancu, 1996) are self-report instruments that provide estimates of fear related to a range of social situations. Other self-report instruments are designed to assess fear of specific types of situations, such as the Self-Statements during Public Speaking Scale (SSPS; Hofmann & DiBartolo, 2000) that measures fear of public speaking and the Social Phobia Scale (SPS; Mattick & Clarke, 1998) that assesses fear of being scrutinized.

Several methods have been suggested to evaluate maladaptive cognitions related to social situations owing to the extent to which they are implicated in social phobia. These include thought listing (in which the client writes down his or her thoughts), articulated thoughts (in which the client speaks aloud his or her thoughts while completing a social task), and structured measures to assess specific thoughts (Orsillo & Hammond, 2001). Recently, researchers, and to a lesser extent clinicians, are beginning to use paradigms developed in experimental cognitive psychology, such as the modified Stroop task and the visual dot probe, to assess attentional and interpretational bias associated with social situations.

Behavioral assessment techniques that can be useful in evaluating SP include behavioral approach tests, in which the patient with SP is asked to participate in a social interaction while subjective, objective, and possibly physiological assessments are made. Self-monitoring of fear-producing situations, cognitions, distress, and avoidance and safety behaviors are also valuable assessment tools. Finally, it is important to remember that the assessment process itself could be a fear-eliciting situation for the patient. This may make the evaluation more difficult, but it also provides an opportunity to observe the patient in a social situation and may provide valuable information about the patient.

OBSESSIVE–COMPULSIVE DISORDER

OCD is characterized by the presence of (1) recurrent intrusive and distressing thoughts, images, or urges and (2) repetitive and/or ritualized behaviors or thoughts that function to reduce (at least temporarily) the distress that results from the obsessions (American Psychiatric Association,

1994). Patients with OCD may also exhibit avoidance of stimuli that increase obsessional thoughts. It is estimated that OCD affects approximately 2.5% of the U.S. population at some point in their lifetimes (Karno, Golding, Sorenson, & Burnam, 1988; Rasmussen & Eisen, 1992; Sasson et al., 1997). If untreated, OCD is typically a chronic disorder. Over time, the symptoms may wax and wane in severity, but they rarely remit without treatment.

Among patients with OCD, it is more common for a person to have at least one other psychiatric disorder than to complain of OCD alone (Sasson et al., 1997; Tukel, Polat, Ozdemir, Aksut, & Turksoy, 2002). As many as two-thirds of patients with OCD are also diagnosed with depression (Crino & Andrews, 1996; Rasmussen & Eisen, 1992; Sasson et al., 1997; Tukel et al., 2002). Other common diagnoses are simple phobia, social phobia, dysthymia, and substance use disorders, occurring in 10–20% of samples of obsessive-compulsive patients (Crino & Andrews, 1996; Mayerovitch et al., 2003; Rasmussen & Eisen, 1992; Sasson et al., 1997; Tukel et al., 2002).

Assessment Issues

Features of OCD

Many OCD classification schemes differentiate among patients based on the topography of the ritualistic activity (i.e., compulsions), probably because it is relatively easy to observe overt compulsions. However, it is important to remember that topographically similar compulsions may be associated with different obsessions. Therefore, it is important to identify obsessions, as well to fully understand the manifestation of the disorder. The predominant ritual may be used to classify an individual with OCD (e.g., as a washer, a checker, a repeater), but because typical presentation includes multiple forms of rituals, it is more appropriate to classify symptoms rather than individuals. Thus a patient may be described as having washing and repeating rituals.

Ritualistic washing is the most common compulsion and may involve patients washing themselves and/or cleaning their environment. Typically, cleaning rituals are performed to decrease discomfort associated with obsessional fears about germs or diseases. Another common compulsion is repetitive checking. Patients typically check to assure themselves that a feared catastrophe will not, or has not, happened. Patients may check any number of things, but some of the most common are checking to make sure that doors are locked, faucets and electrical appliances are off or unplugged, that one has not lost important possessions (e.g., keys, wallet), or that one has not hit a pedestrian while driving.

Other rituals such as repeating, ordering, and counting are less commonly reported predominant compulsions. Like checking, these rituals may

serve to prevent disasters, but often the mechanism through which they operate is more superstitious or magical. However, many people with these compulsions complete them to reduce distress or to make things "feel right" rather than to prevent a disaster. When assessing OCD, it is important to remember that repeating and counting and checking (in the form of reviewing) may manifest as mental rituals with little or no observable behavior.

Hoarding, a class of OCD that involves accumulating excessive amounts of material, is atypical in that many hoarders engage in little compulsive activity. Instead, hoarding may best be characterized as avoidant, with the patient avoiding the act of discarding things (e.g., newspapers, string) for fear of not having them in the future. However, some hoarders do compulsively accumulate certain materials (e.g., subscribing to multiple newspapers, downloading excessive amounts of information from the Internet, buying many "copies" of an item). Over time, avoidance of discarding can result in overwhelming accumulations, even in the absence of active gathering rituals. A diagnosis of OCD is complicated when the hoarded material is "collectible" or potentially valuable. In these cases, the diagnosis relies more on the distress associated with the loss or failure to obtain the object or on the impairment resulting from the collection and associated activities (e.g., oven filled with comic books, failure to go to work in order to tend to collection).

Differential Diagnosis

Diagnosing OCD is complicated by the frequent presence of other mental disorders and also because many of the symptoms of OCD overlap or closely resemble the symptoms of other disorders. For example, many people with depression experience ruminations that may appear obsessive but that do not warrant a diagnosis of OCD. Similar ruminations or worry can be seen in patients with generalized anxiety disorder (GAD). PTSD is also characterized by intrusive, unwanted distressing thoughts and/or images. The primary distinctions between obsessions and the intrusive thoughts associated with other disorders have to do with the content of the thought and/or the patient's reaction to the thoughts. For example, the intrusive thoughts associated with PTSD typically focus on recollections of a past trauma, whereas obsessions in OCD are almost always focused on some event that might happen in the future. Depressive ruminations are typically congruent with the person's mood, and rarely does the person try to suppress them. In contrast, people with OCD go to great lengths to try to eliminate their obsessions.

Like patients with OCD, individuals with PTSD may also develop repetitive behaviors or routines that serve to reduce perceived risk and that may appear similar to compulsive rituals. For example, a person with PTSD might check the doors and windows repeatedly to reduce the risk of

an intruder entering. Patients with OCD will experience dramatic increases in distress if their rituals are interrupted. In contrast, individuals with PTSD rarely experience such distress.

Avoidance behaviors, common across the anxiety disorders, can complicate the diagnostic picture as well. As discussed previously, the key to deciding which diagnosis is most appropriate is determining the meaning of the fear, that is, what exactly is being avoided. For example, a person with SP and one with OCD may both avoid social situations, but the individual with SP is fearful of social scrutiny, whereas the person with OCD may fear contracting an illness through shaking hands.

Diagnostic complications also arise with disorders such as hypochondriasis and body dysmorphic disorder (BDD), in which individuals manifest worries that they have a physical malady (illness in the case of hypochondriasis and a physical defect in BDD). Some people with OCD may have similar fears about their physical health (particularly in the case of contamination fears) or appearance. In the case of OCD, these are often accompanied by checking rituals and seeking reassurance from others to reduce distress. People with BDD or hypochondriasis may report similar rituals (e.g., repeatedly seeking consultation from physicians). When additional obsessions or compulsions are present that are not directly related to the physical concern, a diagnosis of OCD is probably warranted (Riggs & Foa, 1993); however, differentiating between OCD and these two disorders is often difficult.

Ritualized and repetitive motor behaviors may occur in Tourette's disorder and related tic disorders. In most cases, differentiating these disorders relies on determining the function of the behaviors. In OCD, the rituals function to lessen the distress associated with the obsession. In contrast, in tic disorders, the behaviors do not reduce distress but are generally perceived as involuntary and unintentional. This task is complicated by the fact that a subgroup of patients with OCD also suffer from a tic disorder.

In some cases, obsessive beliefs are held so strongly that they appear delusional, raising the possibility that a person should be diagnosed with delusional disorder or schizophrenia. Typically, obsessions of delusional intensity are almost always accompanied by rituals, but such rituals are usually absent in patients with delusional disorder. Like schizophrenic delusions, obsessions seen in OCD may be rather bizarre; however, even with bizarre obsessions of delusional intensity, patients with OCD rarely manifest other symptoms of schizophrenia.

Assessment Strategies

A number of assessment instruments have been developed to diagnose and/or measure the severity of OCD. These instruments vary in form (i.e., interview vs. self-report) and focus (i.e., documenting symptoms vs. identifying

treatment targets). One of the most commonly used instruments is the Yale–Brown Obsessive Compulsive Scale (Y-BOCS). The Y-BOCS is a clinician-rated measure that provides an estimate of symptom severity. The Y-BOCS also includes an extensive checklist that provides information about the content of the obsessions and compulsions that can be quite useful clinically.

Several self-report instruments designed to assess OCD symptom severity have been developed. These include the Obsessive–Compulsive Inventory (OCI; Foa, Kozak, Salkovskis, Coles, & Amir, 1998), the Maudsley Obsessive–Compulsive Inventory (MOCI; Hodgson & Rachman, 1977), and the Padua Inventory (PI; Sanavino, 1988). Two additional measures are more focused. The Obsessive Thoughts Questionnaire (Cottraux, 1989) assesses obsessional fears, and the Compulsive Activity Checklist (Freund, Steketee, & Foa, 1987) evaluates impairment due to compulsive rituals.

Several additional self-report instruments are designed to assess cognitive factors associated with the disorder rather than OCD symptoms. These include the Frost Indecisiveness Scale (Frost & Shows, 1993) that measures decision-making difficulties. The Thought–Action Fusion Scale (Shafran, Thordarson, & Rachman, 1996) measures the tendency of respondents to (1) believe that thinking something makes it more likely to happen and (2) believe that thinking about an unacceptable action is equivalent to carrying out that action. Two additional scales, the Responsibility Attitudes Scale and the Responsibility Interpretations Questionnaire (Salkovskis et al., 2000), were designed to measure beliefs about responsibility that are thought to be related to OCD.

As with the other anxiety disorders, behavioral assessments can be a valuable component of a comprehensive evaluation. Self-monitoring of obsessions and rituals can provide vital information about situations that trigger obsessions, as well as a clearer understanding of the functional relationship between the obsessions and compulsions. Clinicians who conduct careful behavioral observations of patients with OCD will often discover numerous subtle rituals and avoidance behaviors that the patient does not report verbally. Often these behaviors are so subtle or carried out so automatically that the patient does not even recognize that they are part of the disorder.

SUMMARY

Advances in the assessment of anxiety disorders are unparalleled in all of psychopathology. Since the development of the more specific set of diagnostic criteria that characterized DSM-III (American Psychiatric Association, 1980) researchers in the anxiety disorders concentrated significant effort to ensure the ready availability of reliable, sensitive, and specific

measures of each of the conditions. At this time, the effort appears to have been successful. In each of the major anxiety disorders, clinicians and researchers possess numerous options to consider when assessing the diagnostic criteria and other relevant dimensions of the anxiety disorders. Future work will focus increasingly on refining these measures, making them more portable for ease in application, and assessing their generalizability across countries, cultures, languages, and age groups. Through such efforts to enhance assessment of anxiety disorders, it is clear that treatment access will improve, as will treatment outcomes.

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